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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,738	03/16/2004	James F. Salzman	TI-36932 (032350.B590)	1843
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TEXAS INSTRUMENTS INCORPORATED			EXAMINER	
P O BOX 655474, M/S 3999			PHAM, HOAI V	
DALLAS, TX 75265				
			ART UNIT	PAPER NUMBER
			2814	
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			05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,738	Applicant(s) SALZMAN ET AL.	
	Examiner Hoai v. Pham	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/16/04; 8/10/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-14 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Toyoda et al. [US 2003/0030155A1] previously applied.

With respect to claims 1, 11 and 20, Toyoda et al. (fig. 1, cols. 3-4) discloses an integrated circuit structure (10), comprising:

forming one or more integrated circuit elements (14) operable to generate an electromagnetic field when an electric current is applied to the integrated circuit element;

forming an encapsulating compound (16) substantially surrounding the one or more integrated circuit elements, the encapsulating compound comprising:

a packaging material; and

an electromagnetic field-attenuating material operable to attenuate the electromagnetic field emitted by one or more of the integrated circuit elements, the electromagnetic field-attenuating material disposed within at least a portion of the packaging material (see col. 4, pp [0057]).

With respect to claims 2 and 12, Toyoda et al. (fig. 1) discloses that one or more of the integrated circuit elements (14) comprise a conductive connector coupling portions of the integrated circuit structure.

With respect to claims 3 and 13, Toyoda et al. (fig. 1) discloses that the conductive connector comprises a bond wire.

With respect to claims 4 and 14, Toyoda et al. (fig. 1) discloses at least two conductive connectors, the electromagnetic field-attenuating material of the encapsulating compound (16) operable to attenuate electromagnetic coupling of the conductive connectors.

With respect to claims 6-7 and 16-17, Toyoda et al. (fig. 1, col. 4, pp [0057]) discloses that the electromagnetic field-attenuating material (16, a ferrite material) is operable to attenuate an electromagnetic field emitted outside the structure by the one or more integrated circuit elements.

With respect to claims 8-9 and 18-19, Toyoda et al. (fig. 1) discloses that the electromagnetic field-attenuating material (16) (col. 4, pp [0057]) comprises a plurality of electromagnetic field-attenuating particles mixed into at least a portion of the packaging material (phenolic resin) (col. 2, pp [0020]) of the encapsulating compound, one or more

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of the plurality of the particles operable to attenuate electromagnetic interference by attenuating electromagnetic fields.

With respect to claim 10, Toyoda et al. (fig. 1) discloses the packaging material comprises plastic (phenolic resin) (col. 2, pp [0020]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda et al. [US 2003/0030155A1] previously applied, in view of Freyman et al. [U.S. Pat. 5,646,451] previously applied.

Toyoda et al. substantially discloses all the limitations as claimed above except a first integrated circuit element comprises a first trace operable to carry an electrical signal within the structure; a second integrated circuit element comprises a second trace operable to carry an electrical signal within the structure. However, Freyman et al. discloses the chip (16) includes first and second circuit (see col. 2, lines 62-67 and col. 3, lines 1-5). Therefore, it would have been obvious to one ordinary skill in the art to have first and second circuit in the chip as taught by Freyman et al. into the device of Toyoda et al. in order to perform appropriate functions in the semiconductor packaging device.

Response to Arguments

6. Applicant's arguments filed 6/27/2006 have been fully considered but they are not persuasive.

Applicant argues that "*Toyoda teaches the "development of the electronic devices which ... have durability relative to the electromagnetic waves generated in the circumference ..." [0006]. His focus is on "an electromagnetic wave shielding technique" for the semiconductor devices [0008] and the method of encapsulating the devices. Being that Toyoda teaches protection of semiconductor devices "from the external part and the electromagnetic waves", it fails to teach or suggest that an "encapsulating compound comprising an electromagnetic field attenuating material operable to attenuate the electromagnetic field emitted by one or more of the integrated circuit elements"*".

Applicant's argument is not persuasive because Toyoda also teaches that the electromagnetic waves generated by the semiconductor element (see [0007]) and the encapsulating compound (16) comprising an electromagnetic field attenuating material (a ferrite material) which the same material as being claimed by Applicant. Therefore, Toyoda meets and anticipates the claimed of the invention.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

8. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai v. Pham whose telephone number is 571-272-1715. The examiner can normally be reached on M-F.

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10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HOAI PHAM
PRIMARY EXAMINER